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(FILE 'HOME' ENTERED AT 06:18:01 ON 17 SEP 2001)
FILE 'CA' ENTERED AT 06:18:12 ON 17 SEP 2001

L1	40166	S POLY?(4A)(ANILIN? OR THIOPHEN? OR PYRROL? OR METHYLPYRROL? OR EDOT OR ETHYLENEDIOXYTHIOPHENE)OR POLYANILI? OR POLYPYRROL? OR POLYTHIOPHEN? OR POLYEDOT OR POLYETHYLENEDIOXYTHIOPHENE
L2	4867	S L1 AND(CARBON BLACK OR GRAPHITE OR FILLER OR PARTICLE OR PARTICUL?)
L3	4488	S L1 AND(CONDUCTOR? OR NOSE OR TASTE OR OLEFACT? OR OLFACTO? OR ARRAY)
L4	546	S L2 AND L3
L5	78	S L4 AND(SENSOR OR SENSING OR DETECTOR OR DETECTING OR DETECTION OR MEASUR?)
L6	468	S L4 NOT L5
L7	103	S L6 AND(CONDUCTIVE POLYMER OR ELECTROCOND?(2A)FIBER)
L8	181	S L5,L7
L9	128	S L8 NOT PY>1998
L10	84	S L8 AND PATENT/DT AND PY<1999
L11	145	S L9-10
L12	36	S L8 NOT L11
L13	1	S L12 AND BIOGENIC

=> d bib,ab l11 1-145

L11 ANSWER 5 OF 145 CA
AN 129:254110 CA
TI Quantitative study of the resolving power of arrays of carbon black-polymer composites in various vapor-sensing tasks
AU Doleman, Brett J.; Lonergan, Mark C.; Severin, Erik J.; Vaid, Thomas P.; Lewis, Nathan S.
CS Division of Chemistry and Chemical Engineering, California Institute of Technology, Pasadena, CA, 91125, USA
SO Anal. Chem. (1998), 70(19), 4177-4190
AB A statistical metric, based on the magnitude and std. deviations along linear projections of clustered array response data, was used to facilitate an evaluation of the performance of detector arrays in various vapor classification tasks. This approach allowed quantification of the ability of a 14-element array of carbon black-insulating polymer composite chemiresistors to distinguish between members of a set of 19 solvent vapors, some of which vary widely in chem. properties (e.g., methanol and benzene) and others of which are very similar (e.g., n-pentane and n-heptane). The data also facilitated evaluation of questions such as the optimal no. of detectors required for a specific task, whether improved performance was obtained by increasing the no. of detectors in a detector array, and how to assess statistically the diversity of a collection of detectors to understand more fully which properties are underrepresented in a particular set of array elements. The resolving power of arrays of carbon black-polymer composites was compared to the resolving power of specific collections of bulk conducting org. polymer or tin oxide detector arrays in a common set of vapor classification tasks.

TP250.A54J

L11 ANSWER 11 OF 145 CA
AN 128:160232 CA
TI The electrocatalytic oxidation of methanol at finely dispersed platinum nanoparticles in polypyrrole films
AU Hepel, Maria
CS Dep. Chem., State Univ. New York Coll. at Potsdam, Potsdam, NY, 13676, USA
SO J. Electrochem. Soc. (1998), 145(1), 124-134
main
AB A new method of the formation of composite polypyrrole films contg. a

highly dispersed three-dimensional array of platinum catalyst particles is presented. $PtCl_4^{2-}$ anions were trapped inside the polypyrrole matrix during the electropolymn. of pyrrole. In the next step followed by soln. exchange, $PtCl_4^{2-}$ anions were reduced to Pt^0 particles with an av. size of 10 nm. Metallic particles were incorporated in elec. conducting polypyrrole films to achieve multielectron-transfer processes in a three-dimensional matrix. These films were characterized using the electrochem. quartz crystal microbalance technique. The use of this technique allowed the authors to evaluate the Pt^0 loading inside the polymer film. The electropolymn. process was controlled by measuring frequency changes of piezoelectrodes. The presence of Pt^0 particles in composite polypyrrole films and their uniform distribution were confirmed by energy-dispersive x-ray spectroscopy and x-ray diffraction. The size of the Pt^0 particles was evaluated from TEM expts. The electrocatalytic effect toward the methanol oxidn. was obsd. Larger surface area and higher catalytic activity were found for electrodes with dispersed Pt^0 nanoparticles in the polymer matrix than electrodes with electrodeposited Pt^0 on the surface of the conductive polymer.

L11 ANSWER 13 OF 145 CA
AN 127:247521 CA
TI A conductimetric system based on polyaniline for determination of ammonia in fertilizers
AU Laranjeira, Jane Maria Goncalves; De Azevedo, Walter Mendes; De Araujo, Mario Cesar Ugulino
CS Laboratorio de Automacao em Quimica Analitica (LAQA), Departamento de Quimica Fundamental, Universidade Federal de Pernambuco-CCEN, Joao Pessoa, 58051-970, Brazil
SO Anal. Lett. (1997), 30(12), 2189-2209
AB A simple conductimetric system to det. ammonia concn. using a sensor based on a conductor polymer was developed. The sensitive element to ammonia is a thin polyaniline film deposited by chem. synthesis in an acrylic substrate prepd. before hand with two graphite electrodes. The conductance of the polyaniline film decreases when exposed to the ammonia gas and this variation can be related to the ammonia concn. To det. ammonia in fertilizer samples a system consisting of a measurement cell, a cond. meter and a strip chart recorder was used. The results were compared with those obtained by three different labs. employing a Kjeldahl method and are in good agreement. The detection range of the system was 0.6 to 3.7 μg.mL-1 with a response time of 4 min. The relative std. deviation of the proposed method was about 5%.

L11 ANSWER 20 OF 145 CA
AN 125:236084 CA
TI Conductive polymer composition and its preparation
IN Kudoh, Yasuo; Kojima, Toshikuni; Akami, Kenji
PA Matsushita Electric Industrial Co., Ltd., Japan
SO Eur. Pat. Appl., 16 pp.

PI	EP 727788	A2	19960821	EP 1996-102349	19960216
	US 5895606	A	19990420	US 1996-602645	19960216
PRAI	JP 1995-29431	A	19950217		

AB A conductive polymer compn. comprises a conjugated double bond-bearing polymer and a composite dopant consisting essentially of an org. anion derived from an anionic surfactant and an inorg. anion derived from a transition metal salt. A process for prepg. the conductive polymer compn. is also described, where the polymn. proceeds rapidly with the coexistence of the org. and inorg. anions. The addn. of fine particles of an oxide is effective in film formation on substrates.

L11 ANSWER 23 OF 145 CA COPYRIGHT 2001 ACS
AN 125:155847 CA
TI Composition containing a polymer and conductive filler and use thereof
IN Angelopoulos, Marie; Brusic, Vlasta A.; Graham, Teresita Ordonez; Purushothaman, Sampath; Roldan, Judith Marie; Saraf, Ravi F.; Shaw, Jane Margaret; Viehbeck, Alfred
PA International Business Machines Corp., USA
SO Eur. Pat. Appl., 11 pp.

PI	EP 717418	A2	19960619	EP 1995-118610	19951127
	US 5700398	A	19971223	US 1994-356026	19941214
	US 5776587	A	19980707	US 1997-928497	19970912
	US 5916486	A	19990629	US 1997-928496	19970912
	US 5922466	A	19990713	US 1997-928468	19970912
	US 5985458	A	19991116	US 1997-928464	19970912
	US 6015509	A	20000118	US 1997-928495	19970912
	US 5997773	A	19991207	US 1999-249302	19990212
PRAI	US 1994-356026		19941214		

AB A compn. contg. a polymeric matrix and a conductive filler component is provided. The conductive filler component comprises conductive particles and a polymer selected from the group consisting of substituted and unsubstituted polyanilines, substituted and unsubstituted polyparaphenylenevinylenes, substituted and unsubstituted polythiophenes, substituted and unsubstituted polyazines, substituted and unsubstituted polyparaphenylenes, substituted and unsubstituted polypyrroles, substituted and unsubstituted polyselenophene, substituted and unsubstituted poly-p-phenylene sulfides, and substituted and unsubstituted polyacetylenes, and mixts. thereof, and copolymers thereof. Compns. of the present invention are useful as corrosion protecting layers for metal substrates, for electrostatic discharge protection, electromagnetic interference shielding, and as adhesives for interconnect technol. as alternatives to solder interconnections. In addn., films of polyanilines are useful as corrosion protecting layers with or without the conductive metal particles.

L11 ANSWER 28 OF 145 CA COPYRIGHT 2001 ACS
AN 124:318996 CA
TI Dielectric properties of conductive composites at microwave frequencies
AU Forsyth, M.; Gregory, E.; Davie, E.; McCulloch, D.
CS Department Materials Engineering, Monash University, Clayton, 3168, Australia
SO Adv. Sci. Technol. (1995), 4(New Horizons for Materials), 279-286
AB The cond. and dielec. properties of conductive polymer composites based on polypyrrole, polyaniline and carbon black fillers combined with polyurethane and polystyrene matrixes are presented. Real and imaginary permittivity of these composites are measured at frequencies between 0.2GHz and 18GHz using various sample configurations. The DC cond. of these composites display the typical percolation behavior previously obsd. in such materials. Electron microscopy indicates that the conductive particles are not homogeneously distributed within the matrix, particularly in the case of the intrinsically conductive polymers. The effect of the filler concn. on the microwave dielec. properties is also discussed. Polypyrrole composites have considerably higher permittivities than those based on carbon black, despite the higher cond. and lower percolation threshold of the carbon black composites.

L11 ANSWER 30 OF 145 CA COPYRIGHT 2001 ACS
AN 124:304251 CA
TI Electrically conductive polymeric compositions

IN Hedges, Winston L.
PA Hexcel Corp., USA
SO U.S., 12 pp. Cont.-in-part of U.S. Ser. No. 930,738.
PI US 5498372 A 19960312 US 1994-195399 19940214
PRAI US 1992-930738 A2 19920814
AB Elec. conductive polymeric compns. suitable for fabricating devices for safely transporting volatile chems. and fuels are disclosed. The elec. conductive polymeric compns. include ≥1 nonconductive matrix polymer and an elec. conductive filler material incorporated in the matrix polymer in an amt. sufficient to provide the conductive polymeric compn. with an elec. cond. of ≥10-10 S/cm. The elec. conductive filler material is intrinsically conductive polymer-coated C black particles. The coating of intrinsically elec. conductive polymer provides a protective shield against loss of particle cond., contributes to the overall cond. of the filler material, and enhances the mech. properties of the filled matrix polymer.

L11 ANSWER 34 OF 145 CA COPYRIGHT 2001 ACS
AN 123:351240 CA
TI Zeta potential measurements on conducting polymer-inorganic oxide nanocomposite particles
AU Butterworth, M. D.; Corradi, R.; Johal, J.; Sascelles, S. F.; Maeda, S.; Armes, S. P.
CS Sch. Chem. Mol. Sci., Univ. Sussex, Falmer/Brighton, BN1 9QJ, UK
SO J. Colloid Interface Sci. (1995), 174(2), 510-17
AB We describe some of our present results on the characterization of aq. colloidal dispersions of conducting polymer-inorg. oxide nanocomposite particles. Such colloids are easily prepd. by synthesizing the conducting polymer in the presence of com. available ultrafine silica (or tin(IV) oxide) particles in aq. media. In the present the study we present electrokinetic data as a function of pH for the following systems: polypyrrole-silica, carboxylic acid-functionalized polypyrrole-silica, amine-functionalized polypyrrole-silica, polyaniline-silica, and polypyrrole-tin(IV) oxide colloids. These data show that both the isoelec. points and zeta potentials of these nanocomposite dispersions are governed primarily by the nature of the charged groups at the inorg. oxide surface rather than by the conducting polymer component. This suggests that the inorg. oxide is the major component at the particle surface, which is consistent with the excellent long-term colloid stability of these dispersions. The aq. electrophoresis measurements also indicate that our surface functionalization expts. were successful: Carboxylic acid groups can be incorporated via copolymn. using an appropriate functional pyrrole comonomer, while amine groups can be introduced via derivatization of the silica component using 3-aminopropyl triethoxysilane.

Armes

L11 ANSWER 40 OF 145 CA COPYRIGHT 2001 ACS
AN 123:170655 CA
TI Electrically conductive pyrrole polymers
IN Myers, Ronald E.
PA B. F. Goodrich Co., USA
SO U.S., 11 pp. Cont.-in-part of U.S. 4,764,573.
PI US 5407699 A 19950418 US 1988-215700 19880705
US 4764573 A 19880816 US 1985-761711 19850802
PRAI US 1984-618701 19840608
AB A process is provided for forming an elec. conductive polymer of a pyrrole monomer, optionally substituted at the 3- and 4- positions. The process comprises dispersing a polymn. initiator selected from the group consisting of anhyd. halides of iron, cobalt or nickel in an anhyd. liq. reaction medium and, adding essentially pure pyrrole monomer, or a soln. of the

monomer in the liq. at a temp. in the range from about -20° to below about the b.p. of the soln. Pyrrole polymers formed are metal halide counterions and conductive material having a cond. 1-150 Ω-1cm-1 or semiconductive material having a cond. 10-3-1 S/cm, depending upon the particular structure of the monomer, the ratio of the initiator to pyrrole monomer, and the mol. wt. of the polymer formed.

L1 ANSWER 43 OF 145 CA
AN 123:95985 CA
TI Morphology Control in Electrochemically Grown Conducting Polymer Films. 3. A Comparative Study of Polyaniline Films on Bare Gold and on Gold Pretreated with p-Aminothiophenol
AU Sabatani, Eyal; Gafni, Yael; Rubinstein, Israel
CS Department of Materials and Interfaces, Weizmann Institute of Science, Rehovot, 76100, Israel
SO J. Phys. Chem. (1995), 99(32), 12305-11
AB Polyaniline (PANI) films deposited galvanostatically on gold electrodes precoated with self-assembled monolayers of p-aminothiophenol (PATP) exhibit significantly higher optical densities than similar polymer films deposited on bare gold, as measured by in situ ellipsometry. At the same time there is no change in the total mass of the deposit or in the amt. of polymer, as indicated by in situ quartz crystal microbalance measurements and by ex situ Rutherford backscattering results, resp. It is therefore concluded that PANI grown on Au/PATP is considerably denser than PANI grown on bare Au. Failure of other self-assembled monolayers to produce a similar effect suggests that the chem. resemblance of PATP to the aniline monomer is a key factor in its ability to alter the morphol. of electrodeposited PANI. The a.c.-impedance measurements indicate that the morphol. change (i.e., densification) is accompanied by pronounced improvement in the electrochem. response of PANI. In particular, the insulator/ conductor switching rate is enhanced for PANI grown on Au/PATP relative to PANI grown under similar conditions on bare Au. Also, a substantial increase in the rate of discharge is obsd. for fresh PANI on Au/PATP when applying a cathodic bias to the electrode. Probably morphol. restructuring is the limiting step during initial discharge of PANI grown on bare Au.

L1 ANSWER 50 OF 145 CA
AN 122:189535 CA
TI Composites of Polypyrrole and Carbon Black. 2. Electrosynthesis, Characterization and Influence of Carbon Black Characteristics
AU Wampler, Wesley A.; Wei, Chang; Rajeshwar, Krishnan
CS Fort Worth Research Center, Sid Richardson Carbon Co., Fort Worth, TX, 76106, USA
SO Chem. Mater. (1995), 7(3), 585-92
AB A variety of polypyrrole (ppy)-carbon black composites with the carbon black content ranging from 10 to ~80 wt % were electrochem. synthesized from aq. dispersions of carbon black contg. pyrrole monomer. An electrotrapping mechanism is proposed for the composite film growth; the neg. charged carbon black particles are attracted toward the (pos. charged) anode surface where they are assimilated into the growing ppy matrix. The presence of carbon black enhanced the charge-storage capacity and the electronic cond. of the parent polymer in the resultant electrocomposite as measured by cyclic voltammetry in 0.1 M KCl. The influence of carbon black characteristics on these two properties of the composite was explored by examg. composites electrochem. synthesized from seven com. blacks encompassing a wide range of surface area, porosity, void vol., and electronic cond. Two different carbon black soln. loads (10 and 20 g/L) were employed in these expts. The carbon black porosity and its sp. surface area exerted

a pos. effect on the ability of the ppy-carbon black composite to store charge. Similarly, an increase in the structure of the carbon black had a pos. effect on the c.d. (i.e., the electronic cond.) of the resultant composite. However, the Printex XE-2 carbon black based composite showed anomalously low charge-storage capacity and c.d. in 0.1 M KCl despite the high porosity and structure of its carbon black component. Possible reasons for this are discussed as are data obtained by previous researchers on other types of ppy-carbon composites.

L1 *ANSWER 57 OF 145* CA COPYRIGHT 2001 ACS
AN 121:256975 CA
TI Polypyrrole composites containing platinum or carbon black: from synthesis to novel applications
AU Rajeshwar, K.; Wei, C.; Wampler, W.; Bose, C. S. C.; Basak, S.; German, S.; Evans, D.; Krishna, V.
CS Dep. Chem. Biochem., Univ. Texas, Arlington, TX, 76019-0065, USA
SO Polym. Prepr. (Am. Chem. Soc., Div. Polym. Chem.) (1994), 35(1), 234-5
AB Modification of the electrochem. properties of polypyrrole with Pt or carbon black is described. These composites exhibited enhanced properties relative to the neat polymer. The use of these materials in new applications involving pollutant remediation/*sensing*, and in supercapacitor devices is finally demonstrated.

L1 ANSWER 59 OF 145 CA COPYRIGHT 2001 ACS
AN 121:193358 CA
TI Dispersion of electrically conductive particles in a dispersing medium
IN Wiersma, Aaltje Elizabeth; Van de Steeg, Lucia Maria Angel
PA DSM N.V., Neth.
SO Eur. Pat. Appl., 13 pp.

PI	EP 589529	A1	19940330	EP 1993-202714	19930920
	US 5415893	A	19950516	US 1993-125245	19930923
PRAI	NL 1992-1657		19920924		

AB The dispersion comprises a binder and an elec. conductive polymer, and a stabilizer in a dispersing medium. The particles contain a non-ionic stabilizer. The stability of the dispersion is very good. In addn. the dispersion is extremely suitable for providing objects with a coating having good elec. conductive, distribution, and adherent properties.

L1 ANSWER 60 OF 145 CA COPYRIGHT 2001 ACS
AN 121:168318 CA
TI Conducting polymer film containing nanodispersed catalyst particles: a new type of composite material for technological applications
IN Rajeshwar, Krishnan; Bose, Chalasani S. C.
PA University of Texas System, USA
SO U.S., 43 pp.
PI US 5334292 A 19940802 US 1992-931212 19920817
AB An electronically conductive polymer (preferably polypyrrole) film comprises colloidal catalytic (Pt) particles ($\leq$10 nm) homogeneously dispersed therein. A method for producing the film comprises prepg. a colloidal suspension of catalytic particles in a soln. comprising an electronically conductive polymer precursor. An electronically conductive polymer film is then electrosynthesized, incorporating homogeneously dispersed colloidal catalytic particles. Colloidal Pt particles are produced by citrate redn. of Pt(IV) to Pt0. A porous conductive polymeric matrix includes homogeneously dispersed colloidal catalytic particles to catalyze a reaction involving subjection of reactants to this material in an electrochem. conductive or other context. Advantages of this type of catalysis involves ready retrieval of the catalytic particles, efficient utilization of

expensive catalytic particles such as Pt, resistance of the particles to at least high mol. wt. poisons which will not penetrate the polymeric matrix and, finally, the lack of satn. of catalytic activity in contrast to that seen with surface coated thin polymer layers.

L11 ANSWER 81 OF 145 CA COPYRIGHT 2001 ACS
AN 118:14861 CA
TI Electrically conductive-polymer-coated metal particles
IN Hosokawa, Hiroshi; Kamada, Kensuke
PA Mitsubishi Rayon Co., Ltd., Japan
SO Eur. Pat. Appl., 10 pp.

PI	EP 488321	A1	19920603	EP 1991-120442	19911128
	US 5215820	A	19930601	US 1991-799228	19911127
PRAI	JP 1990-339674	A	19901130		

AB Fine metal particles coated with elec. conductive polymers are protected from oxidn. and have improved handling properties. The conductive polymer may contain a polymeric electrolyte as a dopant.

L11 ANSWER 87 OF 145 CA COPYRIGHT 2001 ACS
AN 117:152336 CA
TI Conducting polymer composites. Polypyrrole-metal oxide latexes
AU Partch, R. E.; Gangolli, S. G.; Owen, D.; Ljungqvist, C.; Matijevic, E.
CS Cent. Adv. Mater. Process., Clarkson Univ., Potsdam, NY, 13699, USA
SO ACS Symp. Ser. (1992), 492(Polym. Latexes), 368-86
AB Elec. conducting latexes of polypyrrole (I) coated on inorg. cores were obtained by deposition of pyrrole on catalytically active particles. The finely dispersed core materials were hematite (polyhedral and spindle-type), silica coated with hematite, magnetite, and CeO2. The degree of polymer coverage could be controlled by varying the aging time and the properties of the carrier particles. Also, Y basic carbonate was coated on I latex. The coated particles were characterized by TEM, elemental and thermogravimetric analyses, electrophoresis, x-ray diffraction, and cond. measurements. The d.c. cond. of all but the magnetite particles coated with polymer were comparable to those reported for pure I and they increased with pressure.

L11 ANSWER 95 OF 145 CA COPYRIGHT 2001 ACS
AN 114:209263 CA
TI Coated particulate metallic materials for EMI and/or RFI shielding and method of coating
IN Kathirgamanathan, Poopathy
PA Cookson Group PLC, UK
SO Eur. Pat. Appl., 11 pp.

PI	EP 403180	A2	19901219	EP 1990-306274	19900608
	US 5225110	A	19930706	US 1990-535057	19900608
PRAI	GB 1989-13512		19890613		

AB Powder or flake or granular metallic materials are coated with conductive polymer. Ni spheres were added to a soln. of aniline in H2O, an acid, e.g. aq. p-MeC6H4SO3H, soln. was added, (NH4)2S2O8 was added, and the mixt. stirred to coat the spheres (10% polyaniline). C black and coated spheres (ratio 10:30) were compounded with ethylene-propylene copolymer (melt index 2-4) to give material for EMI shielding (90% effective at 0.1 MHz).

L11 ANSWER 112 OF 145 CA COPYRIGHT 2001 ACS
AN 110:194356 CA
TI Electric conductive carbon black- and/or graphite-containing polymer composite films
IN Kashiwazaki, Shigeru; Konishi, Shiro

PA Hitachi Cable, Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 5 pp.
PI JP 63308807 A2 19881216 JP 1987-144375 19870610
AB Elec. conductive composite films, having balanced tensile strength and elongation, are prepd. from carbon black- and/or graphite-contg. polymer films and elec. conductive polymer layers, e.g. pyrrole (I) or its deriv. A film prepd. by electrolytically polymg. I and tetraethylammonium fluoroborate in MeCN soln. on carbon black (5%)-contg. PVC-coated (30 μm) Pt electrode had elec. cond. 1.8 × 10 s/cm, tensile strength 28 MPa, and elongation 25%, vs. 2.0 × 10, 35, and 4, resp., for polypyrrole only.

L11 ANSWER 116 OF 145 CA
AN 110:127768 CA
TI Ion-selective electrode having a non-metal sensing element
IN Geist, Jill M.; Schapira, Thomas G.; Messner, Scott C.
PA Abbott Laboratories, USA
SO Eur. Pat. Appl., 13 pp.
PI EP 291904 A2 19881123 EP 1988-107817 19880516
US 4889612 A 19891226 US 1987-53446 19870522
PRAI US 1987-53446 19870522
AB This electrode comprises an elec. insulating substrate having a substantially planar 1st surface; a nonmetallic conductor on the 1st surface; means affixed to this 1st surface and coupled to the conductor, for sensing a potential located at a situs free of metalization; and an elec. insulating layer covering a portion of the conductor. The means for sensing comprises a nonmetallic, conductive layer, and an exposed ion-selective membrane covering the conductive layer. The elec. insulating layer comprises a 1st stratum affixed to the 1st surface, a 2nd stratum wherein at least a portion thereof is intersolubilized with the membrane layer, and a 3rd stratum covering the 2nd stratum. This electrode may also comprise a field-effect transistor, a nonmetallic conductive offset gate coupled to the field-effect transistor; an exposed ion-selective membrane layer covering the offset gate; and an elec. insulating layer covering at least a portion of the nonmetallic conductive gate. The nonmetallic conductive material may include graphite in a suitable supportive and binding matrix or may include a conductive polymer, such as polyacetylene and polypyrrole among others. In this way, metalization is not used on the surface of the device which contacts an analyte.

L11 ANSWER 119 OF 145 CA
AN 109:171544 CA
TI Electrically conductive composite manufacture
IN Tamura, Shohei; Sasaki, Sadamitsu; Abe, Masao; Ichinose, Takashi
PA Nitto Electric Industrial Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 8 pp.
PI JP 63120733 A2 19880525 JP 1986-266284 19861108
AB Composites with elec. cond. >10-6 S/cm, contg. electron acceptor dopants, are prepd. by oxidative polymn. of PhNH2, derivs., or salts in solvents contg. carbon black. A soln. of water 52, 97% H2SO4 15, AcOH 52, and PhNH2 7.79 g was mixed with 0.29 g Ketjenblack EC in an ultrasonic disperser, cooled to 5.8°, and stirred with 6.85 g (NH4)2S2O8 for 1 h to give a bright green polymer with elec. cond. 9.2 S/cm; vs. 3.2 without carbon black. Cond. was increased to 12.5 S/cm by pretreating the carbon black with H2O2.

L11 ANSWER 121 OF 145 CA
AN 108:187479 CA
TI Manufacture of highly electrically conductive polymer compositions
IN Ikezaki, Takashi; Kira, Masaaki; Yamamoto, Satoshi; Murakoshi, Yoshihiko

PA   Showa Denko K. K., Japan; Hitachi, Ltd.
SO   Jpn. Kokai Tokkyo Koho, 4
PI   JP 62257968   A2   19871110   JP 1986-100854   19860502
AB   Compns. with improved moldability and mech. strength, useful for electrodes and condensers, are prepd. by polymg. anilines I (R1-R6 = H, halo, amino, nitro, C.ltoreq.10 alkyl or alkoxy, allyl, C6-10 aryl) in the presence of elec. conductive materials and powd. thermoplastic resins. Thus, 20 g PhNH2 was polymd. in aq. HCl contg. 2.0 g Ketjenblack and 4.0 g linear low-d. polyethylene (II) powder at 40° under addn. of 66.7 g (NH4)2S2O8 for 4 h, then the product

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